

CLAIMS

1. A peel type blind rivet assembly for setting in relatively soft material, said
5 rivet assembly comprising :

an elongate tubular body having a shank disposed about a shank axis and a preformed head at a first end thereof and an expandable portion at the opposed end of the shank remote from the head and formed by a plurality of slots, which slots terminate remote from said first end;

- 10 a mandrel having a stem extending through and co-axial with said tubular body, which mandrel further having a head having a maximum external diameter greater than the internal diameter of the body; wherein,

at least one of said plurality of slots increases in width as it extends from an outer surface to an inner surface of said shank.

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2. A blind rivet assembly as claimed in claim 1 wherein the side walls of said at least one slot are curved.

3. A blind rivet assembly as claimed in either of the preceding claims
20 wherein each of said plurality of slots are equally spaced about the circumference of said tubular body so that the angular displacement between adjacent slots about the shank axis is constant.

4. A blind rivet assembly as claimed in any one of claims 1 to 3 wherein said
25 plurality of slots comprises three slots.

5. A blind rivet assembly as claimed in any one of the preceding claims wherein an axial inner end of at least one of said plurality of slots is radially inclined so that said at least one slot is longer adjacent said inner surface of said
30 shank than adjacent said outer surface of said shank.

6. A blind rivet assembly as claimed in any one of the preceding claims wherein said mandrel head forms a shoulder between a mandrel stem and an outer surface of said mandrel head, which shoulder extends perpendicular to said shank axis.

7. A blind rivet assembly as claimed in any one of the preceding claims wherein the wall thickness of said body is constant along its axial length.

8. A blind rivet assembly as claimed in claim 8 wherein the external diameter of said body is constant along its axial length.

9. A blind rivet assembly as claimed in any one of the preceding claims wherein said mandrel stem has a reduced diameter section adjacent said shoulder.

10. A blind rivet assembly as claimed in any one of the preceding claims wherein said maximum diameter of said mandrel head is equal to the diameter of said body.

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11. A punch for manufacturing said tubular body of a peel type blind rivet as claimed in any one of the preceding claims, comprising an elongate solid body having a polygonal cross section wherein at least one convergence zone formed on an end face of said punch by the tapering convergence of two adjacent side walls forms a slot cutting element.

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12. A punch as claimed in claimed 11 wherein the convergence zone of each pair of adjacent side walls forms a cutting element on said end face.

13. A punch as claimed in claim 11 or claim 12 wherein said adjacent side walls are curved.

14. A punch as claimed in claim 13 wherein said curved walls are concave.

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15. A punch as claimed in any one of the claims 11 to 14 wherein the or each cutting element on said end face is radially inclined relative to a longitudinal axis of said punch.

10 16. A punch as claimed in any one of claims 11 to 15 having a cylindrical projection extending from said end face, and co-axial with a longitudinal axis of said punch, said projection for receipt within a central bore of said tubular body to align said punch therewith.

15 17. A punch as claimed in any one of claims 11 to 16 wherein said polygonal cross section defines a regular polygon.

18. A punch as claimed in any one of claims 11 to 17 which has a substantially triangular cross section.

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19. A blind rivet assembly substantially as herein described with reference to the accompanying drawings.

20. A punch for manufacturing a tubular body of a peel type blind rivet, of the
25 type according to any one of claims 1 to 10, substantially as herein described with reference to the accompanying drawings.